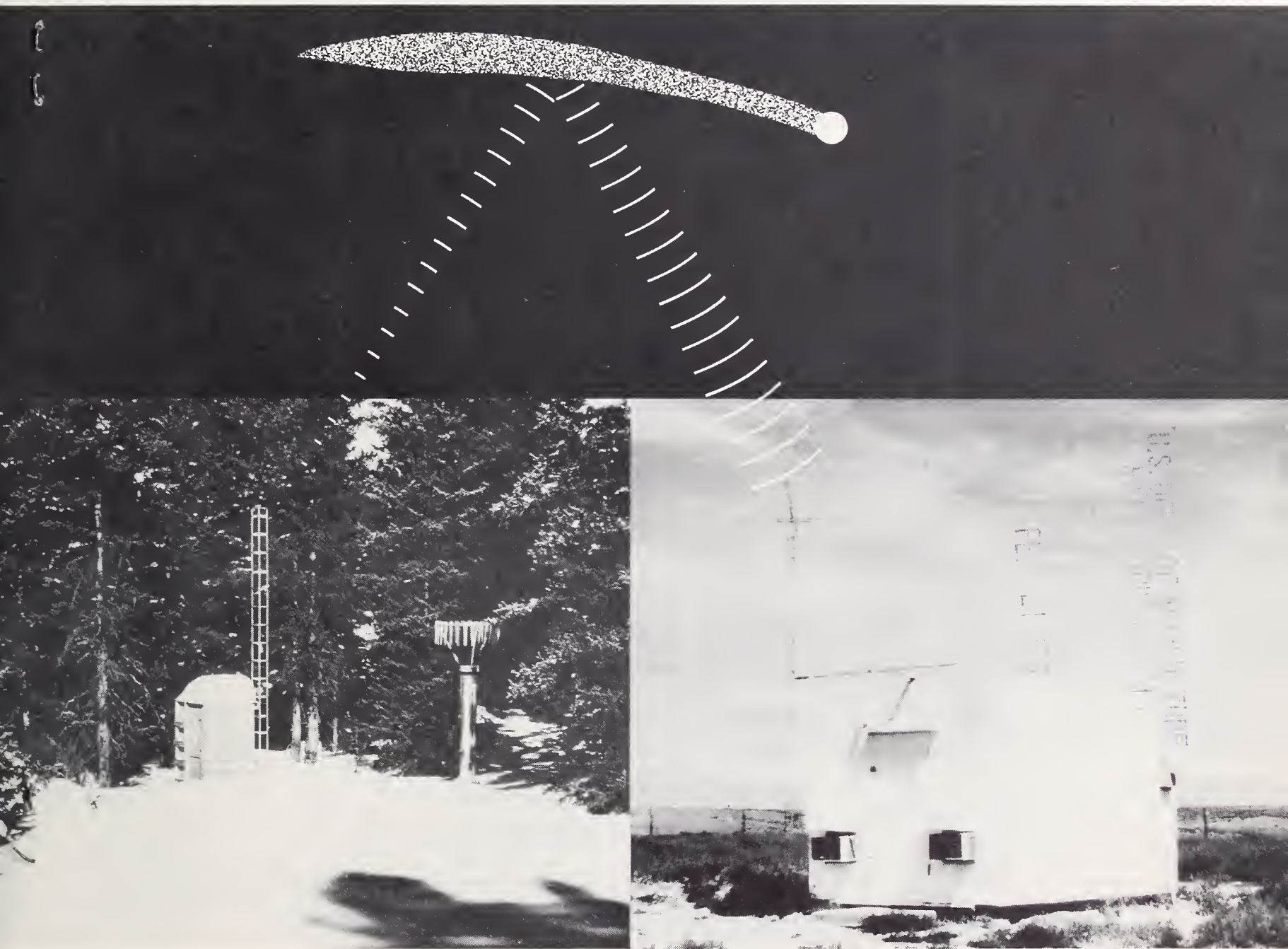


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Do not assume content reflects current scientific knowledge, policies, or practices.

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WATER SUPPLY OUTLOOK FOR MONTANA



U. S. DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Collaborating with

MONTANA AGRICULTURAL EXPERIMENT STATION

Data included in this report were obtained by the agencies named above in cooperation with Federal, State and private organizations listed inside the back cover of this report.

AS OF
FEB. 1, 1978

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

COVER PHOTO: SOME OF THE DATA IN THIS REPORT HAVE BEEN RECEIVED THROUGH THE SOIL CONSERVATION SERVICE'S NEW SNOTEL SYSTEM WHICH TRANSMITS INFORMATION VIA THE SPACE AGED METEOR BURST METHOD FROM DATA SITES TO MASTER STATIONS LIKE THESE.

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, West Technical Service Center, Room 510, 511 N.W. Broadway, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	Room 129, 2221 East Northern Lights Blvd., Anchorage, Alaska 99504
Arizona	Room 3008, Federal Building, Phoenix, Arizona 85025
Colorado (N. Mex.)	P. O. Box 17107, Denver, Colorado 80217
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 98, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1220 S.W. Third Ave., Portland, Oregon 97204
Utah	4012 Federal Bldg., 125 South State St., Salt Lake City, Utah 84138
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82602

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P.O. Box 388, Sacramento, California 95802 --- for British Columbia by the Ministry of the Environment, Water Investigations Branch, Parliament Buildings, Victoria, British Columbia V8V 1X5 --- for Yukon Territory by the Department of Indian and Northern Affairs, Northern Operations Branch, 200 Range Road, Whitehorse, Yukon Territory Y1A 3V1 --- and for Alberta, Saskatchewan, and N.W.T. by the Water Survey of Canada, Inland Waters Branch, 110-12 Avenue S.W., Calgary, Alberta T3C 1A6.



WATER SUPPLY OUTLOOK FOR MONTANA

and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued by

R.M. DAVIS

ADMINISTRATOR
SOIL CONSERVATION SERVICE
WASHINGTON, D C

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Bozeman, Montana

In Cooperation with

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COOPERATORS	INSIDE BACK COVER

WATER SUPPLY OUTLOOK
February 1, 1978

* * * * *

*
* Most areas have average or above snow pack. This month's
* water equivalents are down in percentage from last month's,
* but there is still 2-4 times more snow than last year.
*
* Streamflow for the spring and summer months is forecast
* within 10 per cent of average on most streams. Exceptions
* are the Kootenai River, Beaverhead River, smaller areas
* near Butte-Anaconda, and near Red Lodge where below aver-
* age runoff is expected. Above average streamflow is fore-
* cast for the Bitterroot and most of the Upper Clark Fork
* River drainage west of the divide. East of the divide,
* above average flows are expected for most of the Yellow-
* stone River drainage and on streams draining the smaller
* mountain ranges of Central Montana.
*
* Most irrigation reservoirs should refill this spring with
* near normal irrigation water supply anticipated for most
* areas.
*
* * * * *

COLUMBIA RIVER DRAINAGE

Snow. The mountain snow pack varies from near average in the extreme Clark Fork River headwaters near Butte, the Kootenai, Flathead and Lower Clark Fork River drainages; to well above average in the Bitterroot River drainage. Most of the Upper Clark Fork and Blackfoot drainages have above average snow water content. Most soils under the snow pack have near average soil moisture with a few areas reporting moisture a little above average.

Streamflow. Spring and summer runoff is forecast to be near average in the Flathead, Blackfoot and Lower Clark Fork drainages and some portions of the Upper Clark Fork drainage. Below average runoff is expected from small drainages near Butte and the Kootenai River

drainage. The Bitterroot River drainage and adjacent drainages can expect above average runoff. Most irrigation reservoirs should fill this spring and late season irrigation supplies should be near average.

MISSOURI RIVER DRAINAGE

Snow. The mountain snow pack is highly variable. Well above average amounts of snow water content was measured in the headwaters of the Madison and a small part of the Big River drainage and in all of the smaller mountain ranges in Central Montana. In extreme contrast, the headwaters of the Red Rock River along the Montana-Idaho border has only about two-thirds of the usual snow pack. Most of the Missouri River Headwaters above the three forks has near average snow. Most of the prairie areas report a heavy snow pack. Moisture stored in the soils under the snow pack is about average in most areas. Parts of the Big Hole and Beaverhead River drainages have below average soil moisture.

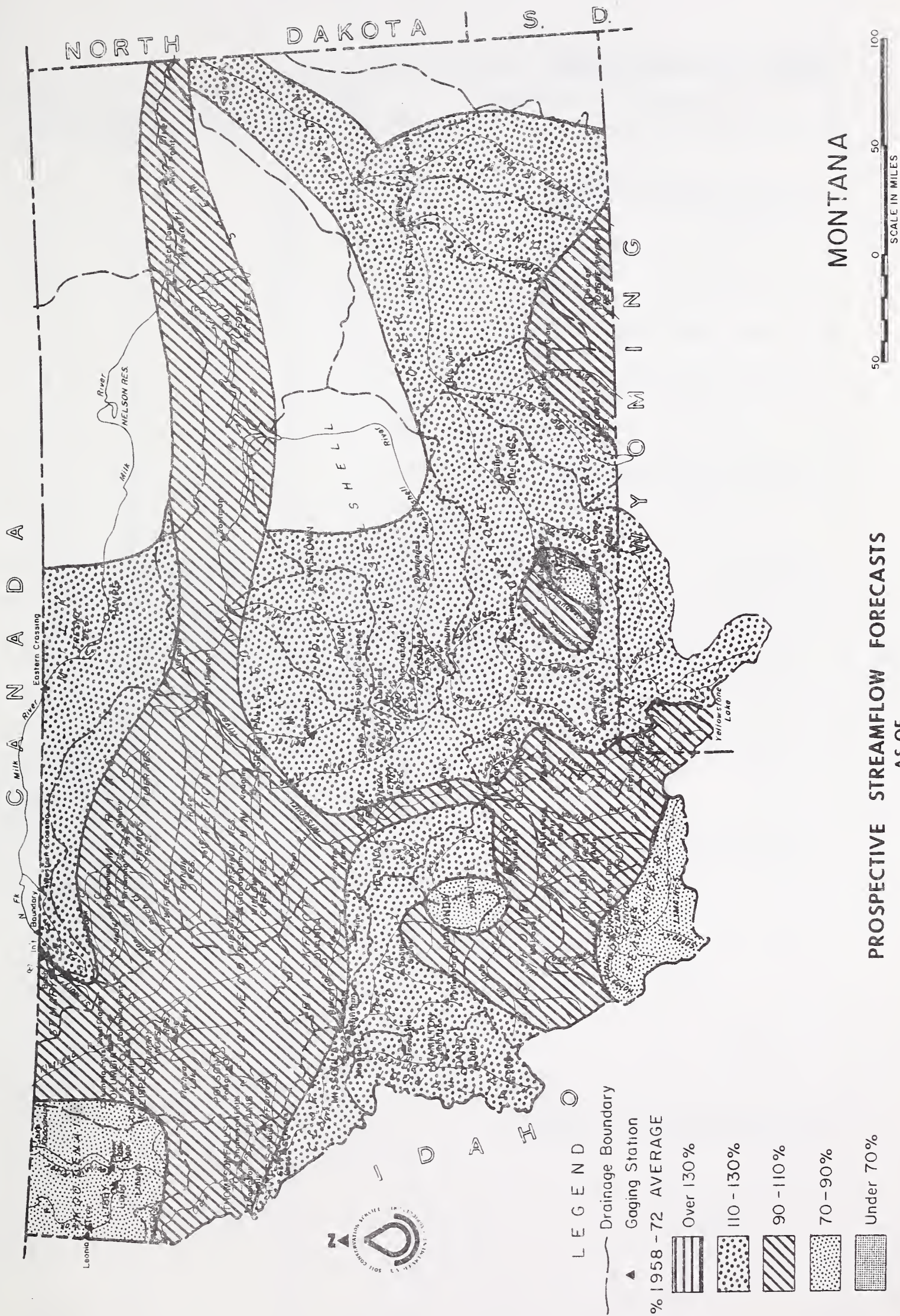
Streamflow. Most of the Missouri River drainage is forecast to have near average spring and summer runoff. Exceptions are the inflow to Clark Canyon Reservoir which is forecast below average and above average for the Milk, Boulder, East Gallatin, Smith, Belt, Judith, and Musselshell Rivers. All irrigation reservoirs are expected to fill this spring. Most areas can expect average or above late season irrigation water supplies.

YELLOWSTONE RIVER DRAINAGE

Snow. With the exception of below average snowpack on the north-east slope of the Beartooth Mountains, all areas have average or above

amounts of water stored in the snow pack. Most of the main water producing areas of the Yellowstone River headwaters have well above average snow water content. Most of the valley areas also report heavy snow packs. The amount of moisture stored in the soil under the snow is generally below normal in the mountain areas.

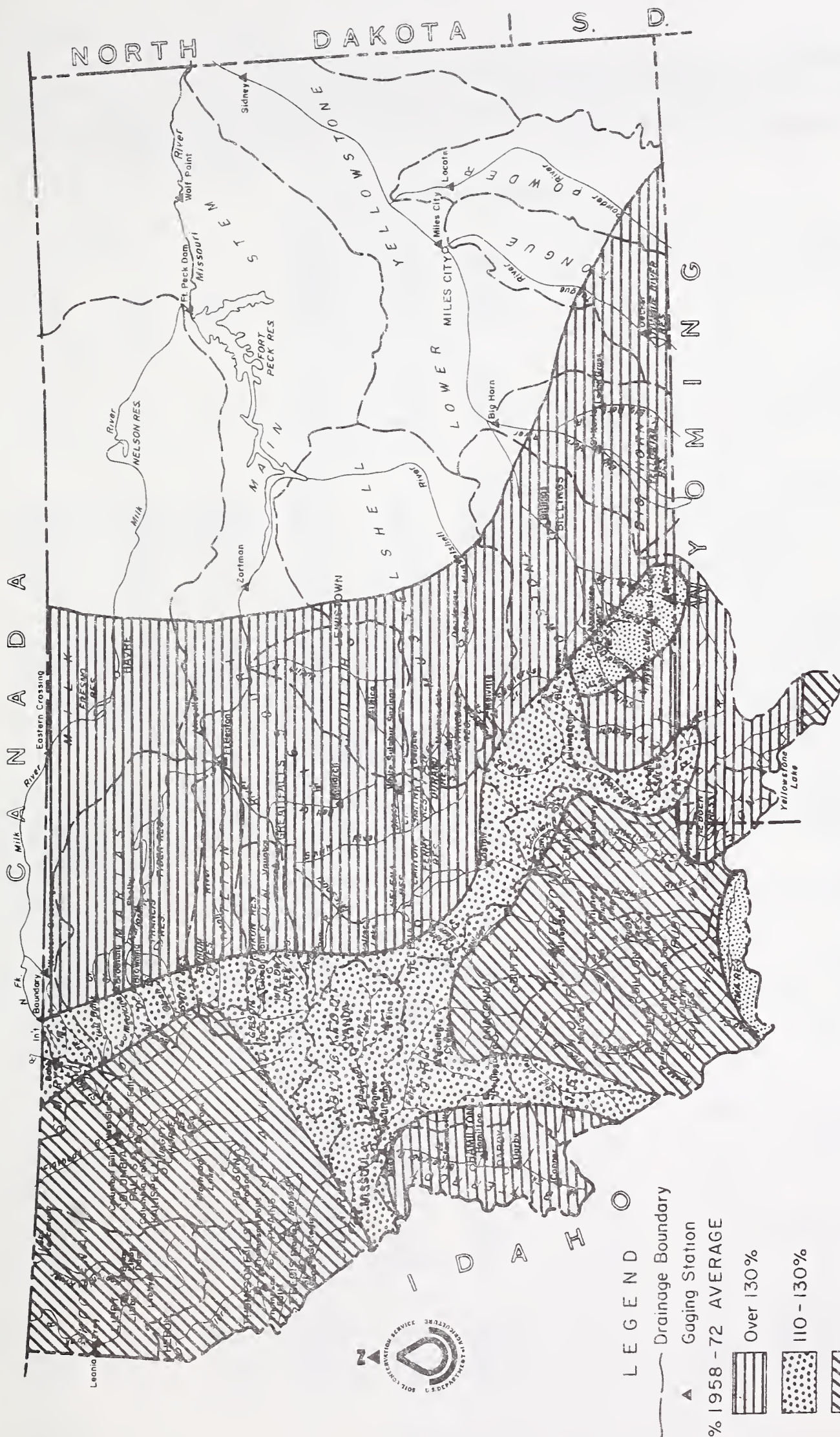
Streamflow. The inflow to Cooney Reservoir is expected to be below average. Most other streams in the Yellowstone River basin are forecast to have above average spring and summer runoffs. The Stillwater, Little Bighorn and Upper Tongue River drainage should have near average runoff. Late season irrigation supplies should be average or above.



SUMMARY of SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF:	
		Last Year	Average
<u>COLUMBIA RIVER DRAINAGE</u>			
Kootenai	26	230	94
Flathead	10	270	105
Upper Clark Fork	23	270	122
Lower Clark Fork	3	339	108
Bitterroot	3	341	134
<u>MISSOURI RIVER DRAINAGE</u>			
Jefferson	22	348	112
Madison	22	370	120
Gallatin	13	240	121
Missouri Main Stem	7	230	131
Judith-Musselshell	2	193	134
Marias-Teton-Sun	3	400	106
Milk	3	257	133
<u>YELLOWSTONE RIVER DRAINAGE</u>			
Yellowstone (above Big Horn)	17	248	127
Big Horn	14	202	134
Little Big Horn	4	112	127
Tongue	5	112	112
Powder	2	142	108
<u>SASKATCHEWAN RIVER DRAINAGE</u>			
Bow	4	209	114
St. Mary's	1	400	103

-5-



MONTANA

MOUNTAIN SNOW WATER EQUIVALENT

AS OF
FEBRUARY 1, 1978



Soil Conservation Service
Bozeman, Montana

SOIL MOISTURE

DRAINAGE BASIN and/or STATION		Profile (Inches)		Date of Survey	Soil Moisture (Inches)		
Name	Elevation	Depth	Capacity		This Year	Last Year	Average †

COLUMBIA RIVER BASIN

Kootenai

Baree Trail	3800	48	7.5	-	-	4.7	5.8
Murphy Lake R. S.	3000	48	22.6	2/1	19.3	19.0	19.4
Raven	3050	48	23.0	1/31	16.0	13.6	18.3

Flathead

Desert Mountain	5600	54	8.4	2/2	7.6	5.3	7.0
Marias Pass	5250	54	6.5	1/21	6.1	3.6	5.1

Clark Fork

Black Pine	7100	48	10.0	1/30	7.6	6.5	7.4
Lubrecht Forest	4100	48	26.8	1/31	15.7	14.0	16.1
Seeley Lake R. S.	4030	48	11.9	2/1	9.6	4.8	7.6
Skalkaho Summit	7260	48	10.8	1/31	10.0	8.5	-

Bitterroot

Gibbons Pass	7100	48	7.1	2/2	5.8	3.5	4.8
Lolo Pass	5250	48	10.6	1/31	7.1	7.1	6.1

MISSOURI RIVER BASIN

Beaverhead

Lakeview	6700	48	15.3	1/31	10.2	8.1	9.1
----------	------	----	------	------	------	-----	-----

Madison

West Yellowstone	6700	48	6.5	2/2	2.6	1.3	2.4
------------------	------	----	-----	-----	-----	-----	-----

Gallatin

Bridger Bowl	7250	48	17.0	1/31	14.9	15.6	15.7
College Site No. 2	4860	48	17.7	1/27	10.7	8.6	13.1
Lick Creek	6860	48	18.8	1/31	13.8	12.7	15.9
Twenty-One Mile	7150	48	10.0	2/1	6.2	2.2	4.5

Missouri Main Stem

Kings Hill	7420	48	11.8	1/31	11.0	4.5	6.8
Stemple Pass	6350	48	5.9	2/2	4.2	3.4	4.0

Milk

Beaver Creek	3950	48	20.9	1/24	8.3	7.2	7.7
Rocky Boy	4700	36	10.1	1/24	7.9	7.1	7.4

Yellowstone

Battle Ridge	6020	48	17.6	1/31	14.8	8.8	12.8
Northeast Entrance	7350	48	9.4	2/2	7.3	4.3	5.8
PMC Dryland	3700	48	20.7	1/31	5.7	5.8	-

RESERVOIR STORAGE (Thousand Acre Feet) END OF MONTH

Basin or Stream	RESERVOIR	Usable Capacity	Usable Storage		
			This Year	Last Year	Average

COLUMBIA RIVER BASIN

Kootenai	Koocanusa	5,694.0	1,920.0	3,157.0	-
Flathead	Hungry Horse	3,428.0	1,791.0	2,428.0	2,484.0
	Flathead Lake	1,791.0	931.5	897.8	1,246.0
	Camas (4)	45.2	-	15.3	23.0
	Mission Valley (8)	100.3	-	45.3	33.2
Clark Fork	Georgetown Lake	31.0	25.0	29.8	27.0
	Lower Willow Creek	4.9	1.1	2.4	1.2
	Nevada Creek	12.6	-	3.7	4.8
	Noxon Rapids	334.6	321.2	269.1	320.8
Bitterroot	Painted Rocks	31.7	7.5	2.0	22.0
	Como	34.9	13.5	-	11.0

MISSOURI RIVER BASIN

Beaverhead	Lima	84.0	-	45.7	31.6
	Clark Canyon	257.2	154.0	158.7	140.6
Ruby	Ruby	38.8	-	22.1	23.4
Madison	Hebgen Lake	337.5	243.2	221.8	201.5
	Ennis Lake	41.0	35.0	33.6	37.7
Gallatin	Middle Creek	8.0	3.6	3.1	3.3
Missouri	Canyon Ferry	2,043.0	1,624.0	1,773.0	1,639.0
	Hauser & Helena	61.9	63.0	57.3	58.0
	Lake Helena	10.4	10.9	8.8	9.2
	Holter Lake	81.9	80.0	81.1	61.8
	Fort Peck Lake	18,910.0	14,290.0	16,260.0	13,220.0
Smith	Smith River	10.6	-	9.6	5.8
	Newlan Creek	12.4	3.7	0.0	-
Musselshell	Bair	7.0	-	3.4	4.2
	Martinsdale	23.1	-	15.2	7.5
	Deadman's Basin	72.2	-	-	43.6
Sun	Gibson	99.0	23.2	64.1	39.1
	Willow Creek	32.2	15.8	26.6	18.9
	Pishkun	32.0	19.2	16.4	17.5
Marias	Lower Two Medicine	11.9	-	6.7	-
	Four Horns	19.2	-	-	-
	Swift	30.0	8.4	18.0	16.2
	Lake Frances	111.9	27.5	78.6	78.0
	Elwell (Tiber)	1,347.0	518.4	498.7	577.1
Milk	Beaver Creek	3.5	2.3	1.6	-
	Fresno	127.2	18.9	66.2	56.2
	Nelson	66.8	65.1	47.1	42.6
St. Mary's	Lake Sherburne	66.2	28.4	14.8	18.5
Yellowstone	Mystic Lake	21.0	8.6	3.7	10.9
	Cooney	27.4	12.3	13.7	13.8
	Tongue River	68.0	29.6	35.0	27.8
Big Horn	Big Horn Lake	1,356.0	899.4	905.6	792.5

STREAMFLOW FORECASTS

STREAMFLOW FORECASTS		THIS YEAR		PAST RECORD	
BASIN, STREAM and or FORECAST POINT	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average
COLUMBIA RIVER BASIN					
KOOTENAI RIVER below Libby Dam (1)		88	Apr-Sept	3,976	7,456
	5,600	87	Apr-July	3,043	6,417
	4,350	87	Apr-June	2,469	5,011
FISHER RIVER near Libby	255	89	Apr-Sept		286
	240	89	Apr-July		269
YAAK RIVER near Troy	485	85	Apr-Sept		568
	460	85	Apr-July		544
KOOTENAI RIVER at Leonia (1)	8,100	89	Apr-Sept	4,910	9,073
	7,100	89	Apr-July	3,844	7,957
	5,700	89	Apr-June	3,050	6,431
INFLOW MOULTON RESERVOIR near Butte (Million Gallons)	180	82	Apr-June	103	220
WARM SPRINGS CREEK AT MEYERS DAM near Anaconda (2)	53.5	105	Apr-Sept	16.0	50.9
	44.0	105	Apr-July	14.0	41.8
FLINT CREEK near Southern Cross (3)	19.7	117	Apr-Sept	9.0	16.9
	17.0	119	Apr-July	7.0	14.3
FLINT CREEK below Boulder Creek (4)	87.5	122	Apr-Sept		71.6
	70.0	125	Apr-July		56.1
INFLOW LOWER WILLOW CREEK RESERVOIR near Hall (5)	17.8	110	Apr-Sept	3.4	16.2
	17.0	110	Apr-July	2.9	15.4
MIDDLE FORK ROCK CREEK near Philipsburg	87.5	115	Apr-Sept		75.9
	80.0	117	Apr-July		68.6
NEVADA CREEK near Finn	24.0	111	Apr-Sept		21.6
	22.5	112	Apr-July		20.1
BLACKFOOT RIVER near Bonner	1,110	108	Apr-Sept		1,031
	1,010	107	Apr-July		934
	880	108	Apr-June		814
CLARK FORK RIVER above Milltown (7)	900	114	Apr-Sept		792
	800	116	Apr-July		690
	690	117	Apr-June		590
CLARK FORK RIVER above Missoula	2,010	110	Apr-Sept	573	1,823
	1,810	111	Apr-July	473	1,624
	1,570	112	Apr-June	408	1,404
WEST FORK BITTERROOT RIVER near Conner (7)	220	128	Apr-Sept		172
	200	128	Apr-July		156

- (1) Adjusted for storage in Lake Koocanusa.
- (2) Adjusted for storage in Silver Lake, diversions to and pumping from Georgetown Lake.
- (3) Adjusted for storage in Georgetown Lake, diversions from and pumping to Silver Lake.
- (4) Sum Flint Creek at Maxville and Boulder Creek at Maxville.
- (5) Sum of North Fork Lower Willow Creek near Hall and South Fork Lower Willow Creek near Hall.
- (6) Difference in observed flow Clark Fork above Missoula and Blackfoot near Bonner.
- (7) Adjusted for storage in Painted Rocks Reservoir.

STREAMFLOW FORECASTS

BASIN, STREAM and or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average

COLUMBIA RIVER BASIN (Continued)

BITTERROOT RIVER near Darby	750	128	Apr-Sept	242	584
	700	129	Apr-July	204	542
	620	129	Apr-June	176	479
SKALKAHO CREEK near Hamilton	68.0	120	Apr-Sept		56.6
	60.0	121	Apr-July		49.6
BURNT FORK CREEK near Stevensville (8)	43.0	122	Apr-Sept		35.3
	38.0	123	Apr-July		31.0
BITTERROOT RIVER at Missoula (9)	1,920	126	Apr-Sept		1,527
	1,800	127	Apr-July		1,412
	1,550	125	Apr-June		1,236
CLARK FORK RIVER below Missoula	3,930	117	Apr-Sept		3,350
	3,610	119	Apr-July		3,036
	3,120	118	Apr-June		2,640
CLARK FORK RIVER at St. Regis (NWS)	5,180	114	Apr-Sept	1,507	4,507
	4,710	115	Apr-July	1,286	4,087
	4,092	115	Apr-June	1,133	3,563
NORTH FORK FLATHEAD RIVER near Columbia Falls	2,000	100	Apr-Sept		1,991
	1,830	101	Apr-July		1,813
	1,560	101	Apr-June		1,551
MIDDLE FORK FLATHEAD RIVER near West Glacier	1,950	102	Apr-Sept	1,011	1,917
	1,780	102	Apr-July	874	1,768
	1,510	100	Apr-June	779	1,514
SOUTH FORK FLATHEAD RIVER near Columbia Falls	2,350	99	Apr-Sept	1,255	2,378
	2,200	98	Apr-July	1,143	2,240
	1,940	98	Apr-June	1,059	1,984
FLATHEAD RIVER at Columbia Falls (10)	6,400	100	Apr-Sept	3,180	6,421
	6,000	101	Apr-July	2,809	5,942
	5,200	101	Apr-June	2,547	5,151
SWAN RIVER near Big Fork	700	98	Apr-Sept		717
	620	98	Apr-July		630
FLATHEAD RIVER near Polson (11)	7,700	101	Apr-Sept	3,600	7,648
	7,190	102	Apr-July	3,165	7,082
	6,100	100	Apr-June	2,871	6,113
CLARK FORK RIVER near Plains (11) (NWS)	13,400	106	Apr-Sept	5,237	12,601
	12,210	106	Apr-July	4,541	11,523
	10,530	106	Apr-June	4,072	9,934
THOMPSON RIVER near Thompson Falls	276	100	Apr-Sept		277
	250	101	Apr-July		248
PROSPECT CREEK at Thompson Falls	150	102	Apr-Sept		147
	140	102	Apr-July		137
CLARK FORK RIVER at Whitehorse Rapids (12) (NWS)	14,700	104	Apr-Sept		14,090
	13,400	104	Apr-July		12,860
	11,530	104	Apr-June		11,092

(NWS) Forecast made by National Weather Service.

(8) Adjusted for diversion into Sunset Highline Canal.

(9) Difference in observed flow Clark Fork above and below Missoula.

(10) Adjusted for storage in Hungry Horse Reservoir.

(11) Adjusted for storage in Hungry Horse Reservoir and Flathead Lake.

(12) Adjusted for storage in Hungry Horse Reservoir, Flathead Lake, and

Noxon Rapids Reservoirs.

Average based on 1958-72 period.

STREAMFLOW FORECASTS

STREAMFLOW FORECASTS	THIS YEAR			PAST RECORD	
BASIN, STREAM and/or FORECAST POINT	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average
MISSOURI RIVER BASIN					
BEAVERHEAD RIVER near Grant (13)	105	72	Apr-Sept	54.0	145
	93.0	73	Apr-July	37.0	127
RUBY RIVER near Alder	87.0	93	Apr-Sept		93.9
	73.0	92	Apr-July		79.4
BIGHOLE RIVER near Melrose	710	95	Apr-Sept		748
	660	95	Apr-July		694
BIRCH CREEK near Glen	13.3	97	Apr-Sept		13.7
	11.0	96	Apr-July		11.5
BOULDER RIVER near Boulder	100	112	Apr-Sept	30.2	89.5
	96.0	112	Apr-July	27.6	85.3
WILLOW CREEK near Harrison	17.2	91	Apr-Sept		18.9
	15.5	91	Apr-July		17.1
MADISON RIVER near Grayling (14)	505	105	Apr-Sept	313	480
	405	108	Apr-July	228	374
MADISON RIVER near McAllister (15)	900	109	Apr-Sept	580	828
	715	110	Apr-July	434	652
GALLATIN RIVER near Gateway	515	108	Apr-Sept		531
	490	109	Apr-July		451
INFLOW MIDDLE CREEK RESERVOIR near Bozeman (16)	31.0	110	Apr-Sept		28.2
	26.8	110	Apr-July		24.4
HYALITE CREEK near Bozeman (17)	48.0	190	Apr-Sept		44.2
	42.0	110	Apr-July		38.2
GALLATIN RIVER at Logan	640	112	Apr-Sept		573
	550	113	Apr-July		487
MISSOURI RIVER at Toston (18)	2,350	104	Apr-Sept	1,270	2,432
	2,195	104	Apr-July	1,021	2,109
SHEEP CREEK near White Sulphur Springs	24.3	119	Apr-Sept	17.8	20.6
	21.5	119	Apr-July	15.5	18.0
SUN RIVER at Gibson Dam (19)	610	103	Apr-Sept	205	590
	560	104	Apr-July	181	541
BELT CREEK near Monarch	150	122	Apr-Sept		123
	140	124	Apr-July		113
MISSOURI RIVER at Fort Benton (20)	4,000	108	Apr-Sept		3,690
	3,395	109	Apr-July		3,123
TWO MEDICINE CREEK near Browning (21)	245	97	Apr-Sept		253
	235	98	Apr-July		240
BADGER CREEK near Browning	127	98	Apr-Sept		130
	110	97	Apr-July		113

(13) Adjusted for storage in Lima and Clark Canyon Reservoirs.

(14) Adjusted for storage in Hebgen Lake.

(15) Adjusted for storage in Hebgen and Ennis Lakes.

(16) Sum of West Fork Hyalite Creek and East Fork Hyalite Creek above Reservoir.

(17) Adjusted for storage in Middle Creek Reservoir.

(18) Adjusted for storage in Hebgen and Ennis Lakes and Clark Canyon Reservoir.

(19) Adjusted for storage in Gibson Reservoir and diversions.

(20) Adjusted for storage in Canyon Ferry Reservoir.

(21) Adjusted for storage in Two Medicine Reservoir and diversions into Two Medicine Canal.

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD	
	FORECAST		THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average	PERIOD	Last Year Average

MISSOURI RIVER BASIN (Continued)

MARIAS RIVER near Shelby (22)	565	101	Apr-Sept	55.6	599
	540	100	Apr-July	38.4	538
MISSOURI RIVER at Virgelle (23)	4,650	107	Apr-Sept		4,342
	4,050	108	Apr-July		3,742
SOUTH FORK JUDITH RIVER near Utica	17.6	118	Apr-Sept		14.9
	16.5	120	Apr-July		13.7
MISSOURI RIVER near Landusky (23)	5,000	106	Apr-Sept		4,739
	4,350	107	Apr-July		4,068
NORTH FORK MUSSELSHELL RIVER near Delpine	7.6	122	Apr-Sept		6.2
	6.5	120	Apr-July		5.4
SOUTH FORK MUSSELSHELL RIVER above Martinsdale	64.0	128	Apr-Sept		50.1
	61.0	129	Apr-July		47.3
MISSOURI RIVER below Fort Peck Dam (24)	4,950	108	Apr-Sept		4,598
	4,400	108	Apr-July		4,069
MILK RIVER at Eastern Crossing	315	110	Mar-Sept		286
MISSOURI RIVER near Wolf Point (24)	5,400	110	Apr-Sept		4,898
	4,800	110	Apr-July		4,361
MISSOURI RIVER near Williston, North Dakota (25)	13,300	113	Apr-Sept		11,778
	11,900	114	Apr-July		10,437

SASKATCHEWAN RIVER BASIN

ST. MARY'S RIVER near Babb (26)	475	97	Apr-Sept		490
	410	97	Apr-July		421

- (22) Adjusted for storage in Two Medicine, Four Horns, Lake Frances, and Swift Reservoir.
- (23) Adjusted for storage in Canyon Ferry and Elwell (Tiber) Reservoirs.
- (24) Adjusted for storage in Canyon Ferry, Elwell (Tiber), and Fort Peck Reservoirs.
- (25) Adjusted for storage in Canyon Ferry, Elwell (Tiber), Fort Peck, Buffalo Bill, Boysen and Big Horn Reservoirs. Sum Yellowstone River near Sidney and Missouri River near Culbertson.
- (26) Adjusted for storage in Lake Sherburne.

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average

YELLOWSTONE RIVER BASIN

YELLOWSTONE RIVER at Corwin	2,260	113	Apr-Sept	1,129	1,996
Springs	1,900	114	Apr-July	942	1,662
YELLOWSTONE RIVER near Livingston	2,630	114	Apr-Sept		2,317
	2,200	114	Apr-July		1,926
BOULDER RIVER at Big Timber	445	117	Apr-Sept		379
	420	117	Apr-July		350
STILLWATER RIVER near Absarokee	610	103	Apr-Sept		591
(27)	510	103	Apr-July		494
CLARKS FORK RIVER near Belfry	715	118	Apr-Sept		607
	640	117	Apr-July		546
ROCK CREEK near Red Lodge	128	116	Apr-Sept	61.0	110
	100	119	Apr-July	45.0	84.0
INFLOW COONEY RESERVOIR near	38.5	75	Apr-Sept		51.5
Boyd (28)	30.0	73	Apr-July		41.1
YELLOWSTONE RIVER at Billings	4,830	114	Apr-Sept	2,178	4,246
	4,170	115	Apr-July	1,822	3,613
BIG HORN RIVER near St. Xavier	2,150	116	Apr-Sept	618	1,849
(29)	2,000	117	Apr-July	559	1,706
LITTLE BIG HORN RIVER near	156	107	Apr-Sept		146
Lodgegrass (30)	140	108	Apr-July		129
YELLOWSTONE RIVER at Miles City	7,100	111	Apr-Sept		6,378
(31)	6,350	114	Apr-July		5,555
YELLOWSTONE RIVER near Sidney	7,600	114	Apr-Sept		6,665
(31)	6,850	116	Apr-July		5,895

(27) Adjusted for storage in Mystic Lake.

(28) Sum of Red Lodge Creek above reservoir and Willow Creek near Boyd.

(29) Adjusted for storage in Buffalo Bill, Boysen, Bull Lake and Big Horn.

(30) Sum Little Big Horn below Pass Creek and Lodgegrass Creek near Wyola.

(31) Adjusted for storage in Buffalo Bill, Boysen and Yellowtail Reservoirs.

SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Elevation				Last Year	Average
ARCH FALLS	7350	1/30	41	9.4	3.9	8.7
BADGER PASS	6900	2/04	101	33.0A	-	30.3
BANFIELD MOUNTAIN	5600	1/25	54	17.2	3.6	19.1
BANFIELD MOUNTAIN PILLOW	5600	2/01	SP	14.5	4.0	16.0
BATTLE RIDGE	6020	1/31	39	10.9	3.8	6.5
BEAR PAW SKI AREA	5200	1/24	33	8.9	4.2	4.7
BIG SKY	7700	1/31	50	12.7	6.5	10.6
BIG SPRINGS (ID)	6500	1/30	66	19.4	4.1	14.4
BLACK BEAR	7950	1/27	103	33.4	8.1	25.1
BLACK BEAR PILLOW	7590	1/27	SP	30.4	9.2	22.5
BLACK PINE	7100	1/30	40	12.4	4.3	7.6
BLACK PINE PILLOW	7100	1/30	SP	12.0	4.8	9.4
BLUE LAKE	5900	2/04	79	20.5A	-	20.0
BOW RIVER #1 (AL)	5100	2/02	28	7.8	4.1	6.5
BOXELDER CREEK	5100	1/26	44	10.5	-	-
BRIDGER BOWL	7250	1/31	84	25.8	11.2	20.4
BRIDGER BOWL PILLOW	7250	1/31	SP	24.8	11.2	18.9
BRISTOW CREEK	3900	1/25	38	10.1	1.5	-
BULL MOUNTAIN	6600	1/31	22	4.1	2.6	-
CAMP CREEK (ID)	6800	1/30	24	5.4	1.9	7.4
CANYON (WY)	7750	1/30	55	15.1	4.1	10.7
CARROT BASIN	9000	1/31	80	27.6	9.0	27.9
CARROT BASIN PILLOW	9000	1/31	SP	22.6	7.8	19.9
CARTER CREEK	7400	1/28	13	2.4	.9	3.5
CEDAR GROVE	4100	1/26	35	10.4	3.0	-
CHATEAU LAWN #8 (AL)	5700	1/30	33	8.6	-	7.3
CHESSMAN RESERVOIR	6200	1/30	19	4.6	1.9	2.5
CHICKEN CREEK	4060	1/19	46	12.8	6.2	-
COLE CREEK	7850	1/30	34	7.4	7.0	-
COLE CREEK PILLOW	7850	1/30	SP	7.0	6.5	-
COMBINATION	5600	1/30	20	4.5	2.3	5.6
COMBINATION PILLOW	5600	1/30	SP	4.5	3.2	-
COOKE STATION	8150	1/27	72	21.4	8.6	-
COPPER MOUNTAIN	7700	1/30	33	9.0	2.8	8.0
COYOTE HILL	4200	2/01	44	11.2	5.0	8.3
DAVIS CREEK	5400	1/24	63	20.5	3.4	-
DEADMAN CREEK	6450	1/31	47	12.6	7.4	8.1
DEADMAN CREEK PILLOW	6450	1/31	SP	11.7	7.1	8.1
DESERT MOUNTAIN	5600	2/01	48	12.2	5.2	11.9
DEVILS SLIDE	8100	1/30	69	17.9	9.8	15.3
DISCOVERY BASIN	7050	1/31	30	7.2	4.2	-
DIX HILL	6400	1/29	36	10.3	4.1	-
EAST FORK R.S.	5400	1/27	26	5.4	-	-
EMERY CREEK	4350	2/02	55	15.0	5.4	-
EMERY CREEK PILLOW	4350	2/02	SP	13.1	4.9	-
FISH CREEK	8000	1/27	24	4.9	2.3	-
FISHER CREEK	9100	1/27	103	32.8	15.1	24.8
FISHER CREEK PILLOW	9100	1/27	SP	29.2	14.7	25.5

Average based On 1958-72 period. A - Aerial observation; water content estimated.
 SP - Snow Pillow observation; water content only.

SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Elevation				Last Year	Average
FLEECER RIDGE	7500	1/31	38	11.5	4.1	-
FOURTH OF JULY	3450	1/27	36	9.2	1.4	-
FRIDAY HILL	4620	1/27	59	19.0	5.0	-
FROHNER MEADOWS	6480	1/31	30	8.4	3.8	-
FROHNER MEADOWS PILLOW	6480	1/31	SP	7.4	3.6	-
GARVER CREEK	4250	1/24	39	11.0	1.8	9.9
GARVER CREEK PILLOW	4250	2/01	SP	9.6	3.4	8.6
GIBBONS PASS	7100	2/02	71	22.1	5.9	16.0
GRAVE CREEK	4300	1/23	57	17.1	3.8	-
GRAVE CREEK PILLOW	4300	1/23	SP	16.3	5.0	-
GRIZZLY PEAK	8400	1/30	36	7.6	7.2	11.6
HAWKINS LAKE	6450	1/24	68	24.6	5.7	23.2
HAWKINS LAKE PILLOW	6450	2/01	SP	20.7	6.2	21.6
HEBGEN DAM	6550	1/27	52	13.7	5.1	8.2
HELL ROARING DIVIDE	5770	1/31	73	23.8	10.5	23.3
HERRIG JUNCTION	4850	1/19	70	22.0	7.4	-
HOLBROOK	4530	2/04	58	10.5A	6.0	8.0
HOOD MEADOW	6600	1/30	38	8.0	3.8	7.9
INTERGAARD	6450	1/31	21	4.6	2.1	6.0
ISLAND PARK (ID)	6310	1/30	53	14.8	3.1	11.6
KILGORE (ID)	6200	1/28	34	9.7	1.6	7.9
KING CREEK SADDLE	4550	1/27	32	8.1	3.9	-
KING SPRINGS	4150	1/27	30	7.8	3.1	-
KINGS HILL	7500	1/31	46	12.2	7.2	-
KIT CARSON (ID)	5020	1/28	34	9.7	-	-
KIWANIS CAMP	3720	1/24	26	5.2	-	-
LAKE CAMP (WY)	7850	1/30	37	9.5	1.8	6.0
LAKE CREEK	6100	1/25	28	6.4	2.4	4.9
LAKEVIEW CANYON	6930	1/31	27	6.6	2.0	9.8
LAKEVIEW RIDGE	7400	1/31	28	8.0	1.5	8.8
LICK CREEK	6860	1/31	38	7.7	3.7	6.8
LICK CREEK PILLOW	6860	1/31	SP	5.6	5.8	6.1
LONE MOUNTAIN	8880	1/31	68	20.5	7.8	17.0
LOOKOUT (ID)	5250	1/30	85	27.4	7.0	26.7
LOST SOUL	4800	1/25	48	13.5	3.2	-
LUBRECHT FLUME	4200	1/30	27	7.0	2.8	5.6
LUBRECHT FOREST # 3	5450	1/30	28	7.2	3.2	5.6
LUBRECHT FOREST # 4	4650	1/30	16	3.6	1.2	3.2
LUBRECHT FOREST # 6	4040	1/31	21	5.2	1.9	3.8
LUBRECHT HYDROPLOT	4200	1/30	25	6.0	2.3	5.1
LUPINE CREEK (WY)	7300	1/30	33	8.8	2.6	7.7
MADISON PLATEAU	7750	1/27	60	19.3	4.5	15.4
MADISON PLATEAU PILLOW	7750	1/27	SP	18.7	6.6	16.6
MANY GLACIER	4960	1/23	56	17.2	5.7	-
MANY GLACIER PILLOW	4960	1/23	SP	16.7	5.8	-
MARIAS PASS	5250	1/31	51	13.6	3.4	13.2
MAYNARD CREEK	6210	1/31	66	19.5	6.5	13.7
MAYNARD CREEK PILLOW	6210	1/31	SP	11.2	6.5	8.8
MEADOW CREEK PILLOW	4000	2/01	SP	7.3	4.4	-
MIRROR LAKE #6 (AL)	6600	2/01	30	8.1	4.3	8.4

Average based On 1958-72 period. A - Aerial observation; water content estimated.

SP - Snow Pillow observation; water content only.

SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Elevation				Last Year	Average
MISSION MOUNTAIN	5050	1/27	32	8.2	3.5	-
MOULTON RESERVOIR	6650	1/30	24	4.1	1.5	-
MOUNT LOCKHART	6400	1/31	68	22.6	6.2	-
MOUNT LOCKHART PILLOW	6400	1/31	SP	19.4	6.4	15.6
MT. EISENHOWER #10 (AL)	5000	2/02	22	5.8	1.9	4.1
NEW WORLD	6900	1/31	49	12.6	5.4	10.2
NEWTON MOUNTAIN	5600	1/26	79	27.2	6.8	-
NEZ PERCE CAMP	5580	1/31	49	13.2	-	-
NEZ PERCE CAMP PILLOW	5580	1/31	SP	14.2	5.2	-
NEZ PERCE CREEK	6500	1/30	24	5.9	1.5	5.4
NEZ PERCE PASS	6570	1/31	54	17.3	-	-
NOISY BASIN	6040	1/30	111	37.1	21.0	-
NOISY BASIN PILLOW	6040	1/30	SP	31.4	17.6	-
NOISY CREEK	3600	1/30	35	7.6	4.3	-
NORRIS BASIN (WY)	7500	1/28	38	9.6	2.9	8.0
NORTH FK. ELK CREEK	6250	2/01	43	11.6	4.0	8.6
NORTH FK. ELK CREEK PILL	6250	2/01	SP	11.4	4.0	8.4
NORTHEAST ENTRANCE	7400	1/27	0	8.6	4.1	6.6
OLD FAITHFUL(WY)	7360	2/02	46	14.1	3.0	-
OPHIR PARK	7150	1/29	52	16.9	7.4	-
PETERSON MEADOWS	7200	1/30	28	7.4	3.1	6.3
PETERSON MEADOWS PILLOW	7200	1/30	SP	6.0	3.0	6.7
PICNIC GROUNDS	6200	1/31	21	4.6	1.3	3.0
PIPESTONE PASS	7200	1/30	15	3.0	1.2	3.8
PIPESTONE UPPER #2 (AL)	5300	2/01	28	7.2	3.5	6.3
POORMAN CREEK	5100	1/26	80	28.0	10.0	26.8
POORMAN CREEK PILLOW	5100	2/01	SP	25.6	9.9	22.8
RED TOP	5260	1/27	71	23.4	5.8	-
ROCKER PEAK	8000	1/30	46	13.6	5.1	11.1
ROCKER PEAK PILLOW	8000	1/30	SP	12.1	4.3	11.4
ROCKY BOY	4700	1/24	26	5.8	3.4	3.4
ROCKY BOY PILLOW	4700	1/24	SP	6.7	4.4	3.8
SADDLE MOUNTAIN	7940	2/02	75	24.4	6.4	18.4
SADDLE MOUNTAIN PILLOW	7940	2/02	SP	24.3	6.8	19.1
SAWTELL MOUNTAIN (ID)	8710	1/30	86	27.0	5.1	26.1
SHOWER FALLS	8100	1/30	82	22.3	12.0	16.6
SHOWER FALLS PILLOW	8100	1/30	SP	18.9	11.2	16.7
SILVER RUN PILLOW	6630	1/30	SP	7.0	1.9	-
SKALKAHO SUMMIT	7260	1/31	66	22.6	-	-
SKALKAHO SUMMIT PILLOW	7260	1/31	SP	22.1	6.4	-
SPOTTED BEAR MOUNTAIN	7000	2/04	54	13.0A	6.0	11.4
SPUR PARK	8000	1/31	68	20.6	9.8	16.7
SPUR PARK PILLOW	8100	1/31	SP	22.0	11.6	16.4
STAHL PEAK	6050	1/23	95	32.0	10.8	-
STAHL PEAK PILLOW	6050	1/23	SP	26.2	10.5	-
STORM LAKE	7780	1/30	40	11.8	4.8	9.5
STRYKER BASIN	6180	1/19	79	25.8	10.4	-
STUART MILL	6500	1/31	20	4.1	1.8	4.8
SUCKER CREEK	3960	1/26	18	3.5	-	-
SYLVAN PASS (WY)	7100	1/31	50	14.4	3.8	9.4

Average based On 1958-72 period. A - Aerial observation; water content estimated.

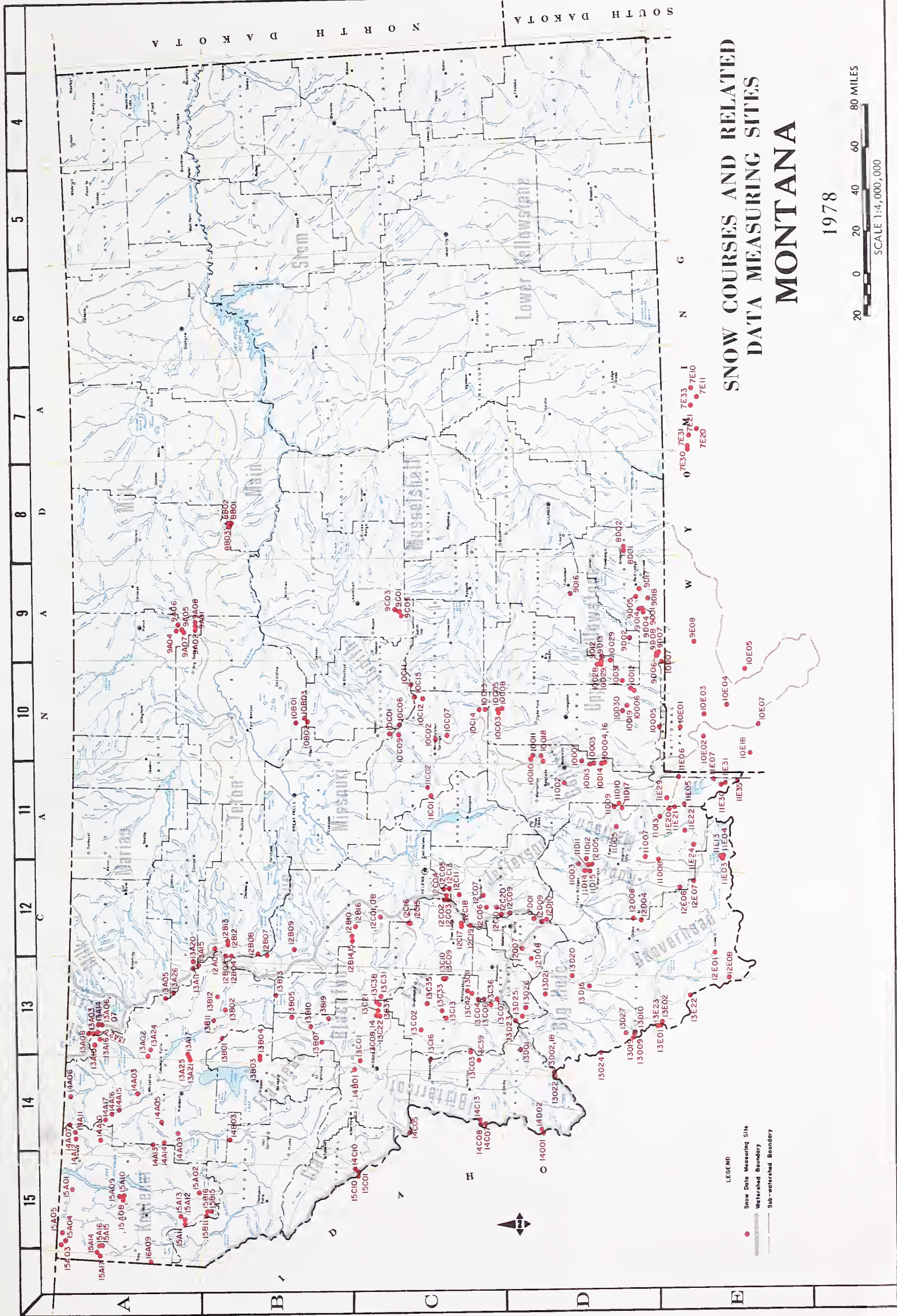
SP - Snow Pillow observation; water content only. -16-

SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Elevation				Last Year	Average
TARGHEE PASS (ID)	7000	1/30	46	11.6	2.6	12.0
TAYLOR ROAD	4080	1/24	28	6.7	4.6	-
TEN MILE LOWER	6600	1/30	28	7.3	2.8	5.4
TEN MILE MIDDLE	6800	1/30	37	9.6	3.7	8.2
TEN MILE UPPER	8000	1/30	45	13.2	4.7	10.1
TEPEE CREEK	8000	1/25	45	12.0	3.2	11.7
TEPEE CREEK PILLOW	8000	1/25	SP	11.2	3.6	9.8
THUMB DIVIDE (WY)	7900	1/30	55	16.3	2.8	15.4
TV MOUNTAIN	6800	2/02	57	16.5	4.2	13.2
TWELVEMILE CREEK	5600	2/02	74	20.4	7.3	15.6
TWELVEMILE CREEK PILLOW	5600	2/02	SP	11.6	5.4	13.4
TWENTY-ONE MILE	7150	1/27	52	15.9	4.4	12.7
TWIN CREEKS	3580	2/04	60	11.0A	-	9.8
VALLEY VIEW (ID)	6500	1/30	47	12.2	2.2	12.3
WALDRON	5600	1/31	42	12.8	3.4	-
WALDRON PILLOW	5600	1/31	SP	9.3	3.3	9.9
WEASEL DIVIDE	5450	1/23	85	28.4	7.3	-
WEST YELLOWSTONE	6700	1/27	38	11.0	2.8	8.2
WEST YELLOWSTONE PILLOW	6700	2/01	SP	7.9	1.9	6.6
WHISKEY CREEK	6800	1/27	62	18.8	4.5	-
WHISKEY CREEK PILLOW	6800	1/27	SP	14.8	4.1	12.0
WHITE ELEPHANT (ID)	7700	1/30	76	23.2	4.1	-
WHITE MILL	8700	1/27	79	25.6	10.8	21.0
WHITE MILL PILLOW	8700	1/27	SP	23.2	9.2	18.0
WILLOW CREEK	6500	1/30	29	6.0	3.8	-
WOLVERINE (WY)	7650	2/01	43	13.0	4.0	-

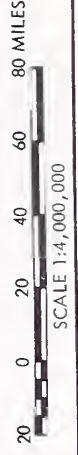
LATE ARRIVING DATA

Warm Springs	7800	1/31	52	16.8	-	-
Warm Springs Pillow	7800	1/31	SP	20.0	-	-
Big Coulee	5100	2/04	37	9.0	-	-
Highwood Station	4600	2/03	30	7.3	6.7	-



SNOW COURSES AND RELATED
DATA MEASURING SITES
MONTANA

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INDEX to MONTANA SNOW COURSES and DATA SITES

SNOW COURSES¹

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000

FLATHEAD RIVER

Basco Peak	14003	5150	11	216	115	3, 4, 5	5
Big Creek	13011	5900	31	288	118	3, 4, 5	5
Big Creek	13003	6750	7	228	189	3, 4, 5	6
Camp Mearcy	13017	6400	30	288	130		
Chicken Creek	14015	4060	14	338	238	P	
Denner Mountain	13002	5950	20	318	189	3, 4, 5, 6	1, 1
Denner Mountain	13003	5950	20	318	189	S.P.T.	6
Fatty Creek	13004	5500	8	228	189	3, 4, 5	6
Flatop Mountain	13019	6300	12	338	189	S.P.T.	1, 6
Griffin Creek Divide	14009	5150	11	288	258	3, 4, 5	5
Griffin Creek	13012	5900	30	288	258	3, 4, 5	5
Omaha Lake	13012	5900	30	288	258	S.P.T.	1, 2
Omaha Lake	13012	5900	30	288	258	S.P.T.	1, 2
North Boring Divide	14003	5770	35	328	228		
Norris Junction	14016	4850	19	348	238	P	15
Oilbrook	13013	4530	18	218	130	A	1
Kilbuck	14006	3890	14	178	268	3, 4, 5	1, 6
Kilbuck	14006	3890	14	178	268	3, 4, 5	1, 6
Mical Creek	13016	4000	29	338	179		
Norley Basin	14025	6040	25	288	199	S.P.T.	1, 2
Norley Creek	13021	3600	35	288	199	3, 4, 5	1, 2
North Fork Jocko	13007	6330	3	178	190	3, 4, 5	1, 5
North Fork Jocko	13007	6330	3	178	190	A	1
Stripped Basin	14017	6180	26	348	248	P	15
Tranched Basin	13001	6900	9	238	179		
Upper Creek	13011	3580	25	268	169	A	1
Upper Highland	13005	6200	28	208	159	3, 4, 5	1
Upper Highland	13005	6200	28	208	159	3, 4, 5	1

CLARK FORK RIVER

[illegible]Moulton Reservoir 12
North Fork Elk Creek 13[illegible]

HUDSON BAY BASIN

ST. MARY RIVER				
Iceburg Lake No. 3	5600	1	35N	17W
Jourquette Lower No. 9	4900	22	35N	16W
Manly Glacier	12627	40	35N	17W
			S.P.T	
			3, 4, 5	
				5
				5
				3, 9
				1, 6

MISSOURI RIVER BASIN

BEAVERHOLE RIVER									
Beagle Spring	12008	8850	6	16S		11W	S,P,T,*		1
Cooney Creek	12009	8850	22	8S		7W	W	3,4,5	1
Cooney Creek	12009	7400	22	8S		7W	W	2,4,5	1
Christian Lake	12096	6000	34	7S		7W	P,NSC	Monthly	1
Christian Lake	13022	8400	24	12S		13W		3,4,5	1
Elk Horn Springs	13015	7800	21	4S		12W		3,4,5	1
Gold Stone	13018	6700	23	16S		12W		3,4,5	1
Gold Stone	13013	7000	3	16S		2W	N,NSC	Monthly	10
Lakeview Canyon	11004	6930	26	14S		2W		1,2,3,4,5	10
Lakeview Canyon	11003	7400	27	14S		2W	P,S,T	1,2,3,4,5	10
Loonli Pass	13021	7400	9	10S		15W		3,4,5	1
Loonli Ridge	13023	7400	10S	10S		15W		3,4,5	1
Loonli Ridge	13025	7200	15	10S		15W	S,P,T	3,4,5	1
Loonli Ridge	13026	7200	15	10S		15W		3,4,5	1
White Pine Ridge	12001	8850	18	14S		9W		3,4,5	1
RUBY RIVER									
Branshan Lick	11014	8850	5	4S		3W		3,4,5	1,1,2
Clover Meadow	12008	8600	28	9S		2W	P	3,4,5	1
Divide	12007	7800	1	12S		4W	S,P,T	3,4,5	1
Middle Hill Creek	11015	7850	17	4S		3W		3,4,5	1,1,2
Norch	12006	8500	18	11S		4W		3,4,5	1
Songster Mine	12005	6960	24	4S		4W		3,4,5	1,1,2
BIG HOLE RIVER									

[illegible]

Jack Creek
Lake Creek

[illegible]

MISSOURI RIVER MAIN STI

Stream	10003	5100	10	19H	9E	1, 2, 3, 4, 5	1, 1, 1
Big Coulee	10003	5100	10	19H	9E	1, 2, 3, 4, 5	1, 1, 1
Bluffs Mountain	11001	7950	1	9N	3E	S, P, T	
Chesman Reservoir	12009	6450	2	8N	5W		
Deer Creek	10005	6450	23	12N	8E	S, P, T	
Deer Mountain	10007	8000	10	8N	8E	1, 2, 3, 4, 5, 3, 6	
Elk Peak	10007	8000	10	8N	8E	1, 2, 3, 4, 5	
Grasshopper	10002	7000	19	9H	8E	1, 2, 3, 4, 5	
Highwood State	10802	5650	16	19N	9E	1, 2, 3, 4, 5	1, 1, 2
Highwood Division	10801	4600	20	20N	9E	1, 2, 3, 4, 5	1, 1, 2
King's Hill	10001	7500	34	13N	8E	1, 2, 3, 4, 5, 3, 6	1, 3
Pickett Creek	11002	6650	1	8N	7E	3, 4, 5	
Rocky Mountain	12002	6650	16	13N	7W	S, P, T	
Ten Mile Lower	12002	6600	12	8N	6W	1, 2, 3, 4, 5	1, 3
Ten Mile Middle	12002	6800	13	8N	6W	1, 2, 3, 4, 5	1, 3
Ten Mile Upper	12004	8000	19	8N	5W	1, 2, 3, 4, 5	3
TETON-MARIAS-SUN RIVERS							
Budger Pass	13A15	6900	4	27N	11W	A, P, S, T	1
Blue Lake	13A20	5900	25	28N	11W	A	1
Cabin Creek	12B06	5200	33	23N	10W	1, 2, 3, 4, 5	1
Clear Lake	12B07	5200	33	23N	10W	1, 2, 3, 4, 5	1
Fresh Creek	12A01	6000	13	26W	10W	3, 4, 5	1
Front Mountain	12B07	7000	20	22S	10W	3, 4, 5	2, 3

13A05	52
12B12	64
Marlao Pass	
Mount Lockhart	

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JUDITH RIVER

	9605	7150	25	12N	17E	
Big Stony	9601	6100	19	12N	19E	3,4,5
Crysal Lake	9602	6100	19	12N	19E	3,4,5
Crystal Lake	9603	6100	19	12N	19E	3,4,5
Spur Park	10006	8100	20	12N	9E	1,2,3,4,5,6
MUSSELHELL RIVER						
	10C15	7600	34	11N	11E	3,4,5
Dayay Park	10C13	7600	2	5N	10E	3,4,5
Engle Creek	10C14	6400	26	6N	10E	3,4,5
Forest Lake	10C11	8050	16	11N	12E	3,4,5
Haymaker	10C12	6450	16	10N	11E	3,4,5
Johnson Park						
MILK RIVER						
	9605	3950	21	29N	16E	Monthly
Beaver Creek	9602	5200	21	28N	16E	3,2,3,4,5
Bear Paw Ski Area	9603	4200	21	28N	16E	3,2,3,4,5
Crocker Creek	9604	4550	9	28N	16E	1,2,3,4,5
Deer Creek	9605	4550	9	28N	16E	1,2,3,4,5
Deer Creek	9606	4150	9	28N	24E	1,2,3,4,5
Kiob Springs	8903	3720	9	29N	16E	3,4,5
Klonsia Camp	8904	3720	9	29N	16E	3,4,5
Mission Mountain	8901	5050	15	28N	24E	3,4,5
Rocky Boy	9601	4700	22	28N	16E	3,4,5
Rocky Boy	9602	4700	22	28N	16E	3,4,5
Taylor Bend	9607	4080	19	29N	16E	3,4,5

UPPER YELLOW

[illegible]

LEGEND

* SNOTEL site--data transmitted daily by telemetry

1/ Blank refers to snow course only at site

S = snow depth

P = precipitation gauge also

M = soil moisture gauge also

T = max-min temperature also

W = wind run also

WSP = wind speed also

RSC = snow course at site

2/ Números 1, 2, 3, 4, 5, 5¹/₂, 6 refer to snow course or aerial marker measurements on January 1, February 1, March 1, April 1, May 1, and June 1. Most snow pillows, temperature, and wind run are daily readings, most precipitation gages and soil moisture are read monthly.

3/ Numerals refer to agency making the snow surveys as follows:

1. Soil Conservation Service
2. Forest Service
3. Fish and Wildlife Service
4. Northern Power Company
5. Bureau of Indian Affairs
6. National Park Service
7. MSU Agricultural Experiment
8. University of Montana School of Forestry
9. Department of Energy, Mines and Resources
10. Canadian Forestry and Wildlife
11. Private Contractor
12. Montana Association of Conservation Districts
13. Montana Department of Fish and Game
14. Butte Water Company

Station

15. State Forester

Agencies and Organizations Cooperating in Montana Snow Surveys

GOVERNMENT AGENCIES

Canada:

Water Survey of Canada, Calgary, Department of the
Environment
Water Resources Service, Department of Lands, Forests
and Water Resources, British Columbia
Alberta Environment, Edmonton, Alberta

Federal:

Department of the Army
Corps of Engineers
U.S. Department of Agriculture
Forest Service
Soil Conservation Service
U.S. Department of Commerce
NOAA, National Weather Service
U.S. Department of the Interior
Bonneville Power Administration
Bureau of Indian Affairs
Bureau of Reclamation
Fish and Wildlife Service
Geological Survey
National Park Service

STATE

Montana Conservation Districts
Montana Department of Fish and Game
Montana Department of Natural Resources and
Conservation
Montana State University - Agricultural Experiment
Station
University of Montana - School of Forestry
DNRC - State Forester

PRIVATE

Montana Power Company
Butte Water Company
The Anaconda Company

Other organizations and individuals furnish valuable
information for snow survey reports. Their cooperation
is gratefully acknowledged.

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